



U.S. Department of Energy

~~OFFICE OF ENVIRONMENTAL RESTORATION~~

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

0065666

05-ED-054

JUL 11 2005

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99352

RECEIVED
JUL 12 2005

EDMC

Dear Mr. Wilson:

HANFORD TANK WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP)
PREVENTION OF SIGNIFICANT DETERIORATION (PSD) APPROVAL ORDER
REVISION REQUEST AND NON-RADIOACTIVE AIR EMISSIONS NOTICE OF
CONSTRUCTION (NOC) APPROVAL ORDER REVISION REQUEST

- References:
1. Ecology letter from M. A. Wilson to R. J. Schepens, ORP, "Modification Request for the River Protection Project-Waste Treatment Plant Notice of Construction (NOC) Approval Order," CCN-076419, dated November 24, 2003.
 2. Ecology letter from R. B. Hibbard to J. E. Rasmussen, ORP, "Prevention of Significant Deterioration Application PSD-02-01 Amendment 1, River Protection Project Waste Treatment Plant," CCN-076186, dated November 4, 2003.
 3. BNI letter from J. P. Henschel to R. J. Schepens, ORP, "Prevention of Significant Deterioration Application for Hanford Tank Waste Treatment and Immobilization Plant," CCN-057126, dated June 24, 2003.
 4. BNI letter from J. P. Henschel to R. J. Schepens, ORP, "Modification Request for the Nonradioactive Air Emissions Notice of Construction Permit Application for the Hanford Tank Waste Treatment and Immobilization Plant," CCN-062723, dated July 17, 2003.

Provided for your review are revision requests to the Hanford Tank WTP PSD Approval (Attachment 1) and Non-radioactive Air Emissions NOC Approval Order (Attachment 2). The revision requests are consistent with the requirements identified under Washington Administrative Code (WAC) 173-400-110(10) and WAC 173-400-750. The requests propose revision to select approval conditions concerning WTP steam boiler emissions compliance.

The PSD Approval (Reference 1) Condition 8 and NOC Approval (Reference 2) Condition 1.3 currently limit the annual operating hours on three of six steam boilers to 3,679 hours per year. The remaining three boilers do not have annual limits on hours of operation. Compliance with the conditions currently requires installation and operation of non-resettable totalizers on each boiler.

Mr. M. A. Wilson
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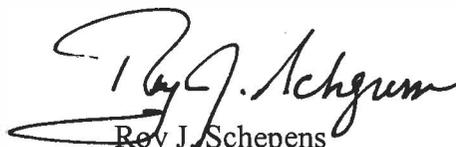
Bechtel National, Inc. is proposing an administrative change to these conditions to utilize annual aggregated fuel consumption instead of operating hours, to monitor compliance. The alternative measurement is based on the same operating durations identified above and utilizes the AP-42 heat input value of 140,000 BTU per gallon for diesel Number 2 to derive an aggregated fuel consumption limit of 13,400,000 gallons per year. The proposal does not change boiler capacity or alter estimated emissions nor does it affect the ambient air impact assessment submitted in the PSD (Reference 3) and NOC application (Reference 4).

The change will increase operational flexibility by removing the hour restriction on the three 42-percent boilers (designated boilers 4, 5, and 6 in PSD Approval Condition 8) since the change is based on an aggregated fuel limit for all six units. The proposal also allows operations personnel to freely operate any individual boiler for any duration as long as the fuel consumption limit is not exceeded during a rolling year summary. Compliance with the annual aggregated fuel consumption limits will be demonstrated through fuel purchase records.

Also included is a Hanford Site Air Operating Permit (AOP) Administrative Amendment request (Attachment 3) to AOP Attachment 1, Table 1.6 for Discharge Point P-WTP-001. The Amendment modifies the AOP to be consistent with the proposed change upon the State of Washington Department of Ecology approval.

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Environmental Division, (509) 373-2566.

Sincerely,



Roy J. Schepens
Manager

ED:DWB

Attachments: (3)

cc: See page 3

Mr. Michael A. Wilson
05-ED-054

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cc w/attach:

R. D. Haggard, BNI
D. W. Hendrickson, Ecology
R. Hibbard, Ecology
O. S. Wang, Ecology
W. E. Green, FHI
Administrative Record
Environmental Portal, LMSI
CH2M Correspondence Control

cc w/o attach:

B. G. Erlandson, BNI
E. S. Aromi, CH2M HILL
C. J. Kemp, CH2M HILL
J. Cox, CTUIR
S. Harris, CTUIR
S. L. Dahl, Ecology
J. L. Hensley, Ecology
J. J. Lyon, Ecology
J. A. Bates, FHI
G. Bohnee, NPT
K. Niles, Oregon Energy
M. F. Jarvis, RL
A. W. Conklin, WDOH
R. Jim, YN

Attachment 1
05-ESQ-054

Hanford Tank Waste Treatment and Immobilization Plant Prevention of
Significant Deterioration Approval Order Revision Request

**Hanford Tank Waste Treatment and Immobilization Plant
Prevention of Significant Deterioration Approval Order Revision Request**

<u>Approval Order #:</u>	<u>Approval Order Title</u>
No. PSD-02-01 Amendment 1 dated November 4, 2003	Prevention of Significant Deterioration Application PSD-02-01 Amendment 1 River Protection Project Waste Treatment Plant

Proposed Revision: Approval Condition 8 currently limits the annual operating hours on three of the six steam boilers to 3,679 hours per year (Approximately 42% units). The remaining three boilers do not have annual limits on hours of operation. Compliance with the condition currently requires installation and operation of non-resettable totalizers on each boiler.

Bechtel National, Inc. is proposing an administrative change to the condition to reflect an alternative emissions limit based on annual aggregated fuel consumption. The alternative measurement is based on the same operating durations identified above and utilizes the AP-42 heat input value of 140,000 BTU per gallon for diesel number 2 to derive an aggregated fuel consumption limit of 13,400,000 gallons per year. The proposal does not request additional boiler capacity; does not alter emissions, and does not change the results of the ambient air impact evaluation submitted in the PSD Application. Tracking fuel consumption will account for variations in boiler operation and will more accurately reflect emissions since fuel consumption and emissions are directly related. Hour restrictions assume equipment is firing continuously at 100 percent capacity and does not provide operational flexibility.

In addition to the proposed changes above, BNI is also proposing editorial changes to approval conditions 12 and 14 to correct typographical errors associated with the O₂ concentration for the Type I and Type II emergency generators. The conditions currently identify NO_x emission limits based on an O₂ concentration of 3%, however the emissions calculation provided in the PSD Application were based on an O₂ concentration of 15%. BNI is requesting that the oxygen concentration be corrected to reflect the correct value of 15%.

The following proposed changes to conditions 8, 12, 14, and 17.3(iii) are provided in redline/strikeout format.

Proposed Approval Condition 8

~~The operation of steam generating boilers 1, 2, and 3 do not have limits on their hours of operation. The operation of steam generating boilers 4, 5, and 6 shall not exceed 3, 679 hours per year (each) when averaged over 12 consecutive months, calculated once per month.~~

~~8.1 Compliance shall be determined by installing and operating a non-resettable totalizer on each boiler.~~

~~8.2 Compliance shall be monitored by including a written statement in each semiannual report of the hours boilers 4, 5, and 6 operated that month and the summation over the previous 12 months.~~

Operation of the six WTP steam boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year rolling year summary calculated daily.

8.1 Compliance shall be determined by maintaining fuel purchase records.

8.2 Compliance shall be monitored by including a written statement in each semiannual report of the total fuel consumption over the previous 12 months.

Proposed Approval Condition 17.3(iii)

Total operating hours from each unit required to do so in Approval Conditions -8, 11, 13, and 15 above.

Proposed Approval Condition 12

Emissions of NO_x from the Type I emergency generator shall not exceed 943 ppmdv or 391.1 pounds per day, at ~~3%~~ 15% O₂, when averaged over 24 consecutive hours.

Proposed Approval Condition 14

Emissions of NO_x from the Type II emergency generator shall not exceed 1,240 ppmdv or 547.5 pounds per day, at ~~3%~~ 15% O₂, when averaged over 24 consecutive hours.

Attachment 2
05-ESQ-054

Hanford Tank Waste Treatment and Immobilization Plant
Non-radioactive Air Emissions Notice of Construction Approval Order
Revision Request

**Hanford Tank Waste Treatment and Immobilization Plant
Nonradioactive Air Emissions Notice of Construction Approval Order
Revision Request**

Approval Order #:

No. DE02NWP-002, Amendment 1
dated November 24, 2003

Approval Order Title :

Non-Radioactive Air Emissions Notice of
Construction (NOC) Permit Application for the
River Protection Project-Waste Treatment Plant

Proposed Revision: Approval Condition 1.3 currently limits the annual operating hours on three of the six steam boilers to 3,679 hours per year (Approximately 42% units). The remaining three boilers do not have annual limits on hours of operation. Compliance with the condition currently requires installation and operation of non-resettable totalizers on each boiler.

Bechtel National, Inc. is proposing an administrative change to the condition to reflect an alternative emissions limit based on annual aggregated fuel consumption. The alternative measurement is based on the same operating durations identified above and utilizes the AP-42 heat input value of 140,000 BTU per gallon for diesel number 2 to derive an aggregated fuel consumption limit of 13,400,000 gallons per year. The proposal does not request additional boiler capacity; does not alter emissions; and does not change the results of the ambient air impact evaluation submitted in the NOC Application. Tracking fuel consumption will account for variations in boiler operations and will more accurately reflect emissions since fuel consumption and emissions are directly related. Hour restrictions assume equipment is firing continuously at 100 percent capacity and does not provide operational flexibility.

The following proposed changes to Approval Condition 1.3 are provided in redline/strikeout format.

Proposed Approval Condition 1.3

~~Three of the steam generating boilers shall not exceed 8,760 hours per year, and three shall not exceed 3,679 hours per year on a 12-month rolling summation calculated once per month. Compliance shall be monitored by installing and operating non-resettable totalizers on each boiler~~

Operation of the six WTP steam boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year rolling year summary calculated daily. Compliance shall be determined by maintaining fuel purchase records.

Attachment 3
05-ESQ-054

Hanford Site Air Operating Permit Administrative Amendment Request

Hanford Site Air Operating Permit Administrative Amendment Request

AOP Attachment 1 Discharge Point:

P-WTP-001

Approval Order Number:

DE02NWP-002, Amendment 1
dated November 24, 2003

Proposed Administrative Amendment: Approval Condition 1.3 currently limits the annual operating hours on three of the six steam boilers to 3,679 hours per year (Approximately 42% units). The remaining three boilers do not have annual limits on hours of operation. Compliance with the condition currently requires installation and operation of non-resetable totalizers on each boiler.

Bechtel National, Inc. is proposing an administrative change to the condition to reflect an alternative emissions limit based on annual aggregated fuel consumption. The alternative measurement is based on the same operating durations identified above and utilizes the AP-42 heat input value of 140,000 BTU per gallon for diesel number 2 to derive an aggregated fuel consumption limit of 13,400,000 gallons per year. The proposal does not request additional capacity; does not alter emissions, and does not change the results of the ambient air impact evaluation submitted in the NOC Application.

The following changes to AOP Attachment 1, Table 1.6, Page ATT 1-72 (Approval Condition 1.3) are provided in redline/strikeout format.

Proposed Approval Condition 1.3

~~Three of the steam generating boilers shall not exceed 8,760 hours per year, and three shall not exceed 3,679 hours per year on a 12-month rolling summation calculated once per month. Compliance shall be monitored by installing and operating non-resetable totalizers on each boiler.~~

Operation of the six WTP steam boilers shall not exceed an annual aggregated fuel consumption limit of 13,400,000 gallons per year rolling year summary calculated daily. Compliance shall be determined by maintaining fuel purchase records.

Periodic Monitoring:	Recordkeeping
Test Method:	Not Specified.
Test Frequency:	Monthly <u>Daily</u>
Required Records:	Records showing all hours of operation <u>Fuel purchase records</u>
State-Only Enforceable:	Yes
Calculation Model IK:	Not Applicable